

Sage Grouse Season Could Close

By Greg Freeman

The North Dakota Game and Fish Department will recommend closing the fall sage grouse hunting season as the number of strutting males counted in spring was an all-time low and well below management objectives.

Aaron Robinson, Department upland game biologist in Dickinson, said only 77 males were counted on 18 active leks or strutting grounds in southwestern North Dakota. Game and Fish biologists started surveying male sage grouse in 1951. The highest bird count was 542 birds in 1953; the low mark was 111 birds in 1996. In 2007, biologists counted 159 males on 19 active grounds.

The number of males counted in spring has gradually declined since 2000, but this spring's count dropped dramatically throughout North Dakota's sage grouse range. "The specific cause of the decline is unknown, but with wet weather conditions last spring and standing water available during late summer, West Nile virus, which is transmitted by mosquitoes, is suspected," Robinson said. "Just 80 miles to the south, sage grouse equipped with radio transmitters in northwestern South Dakota were documented dying from West Nile virus at an alarming rate."

Biologists count the number of males on strutting grounds in spring to get the best population estimate possible. Population estimates are basically just that, estimates, as not every bird on every ground can be accounted for. Biologists arrive at a total by taking the number of males and adding in the female population – the latter are estimated to outnumber the former 2-to-1 – plus those young expected to hatch that year.

Sage grouse, North Dakota's largest native upland game bird, are closely tied to sagebrush habitat, which is very limited in southwestern North Dakota. While grasslands and residual cover looked in relatively good condition this spring, the amount of sagebrush habitat has been slowly declining over the years.

While there are few records of their original



A sage grouse hen tries to hide from passersby.

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range in North Dakota, biologists believe sage grouse never extended far from the Little Missouri River drainage, since that was also the extent of the range of big sage, *Artemisia tridentate*, in North Dakota.

Sagebrush is vital to the survival of sage grouse. The birds rely on the plant for food, cover from the weather and predators, and nesting and brood habitat. From late fall to late spring, sagebrush makes up about 90-plus percent of the sage grouse diet.

Sage grouse hunting seasons have been restrictive the last 20 years and harvest has exceeded 50 birds only once during this time. There is no indication that hunting is a cause for the population decline.

Starting in 2004, wildlife managers delayed the sage grouse season until late September to reduce the amount of hunting pressure on adult female grouse. The adjustment worked, as fewer adult females were harvested the last four years, which was expected to help with long-term management of this unique species.

Reducing harvest of the best producers of young is important since the fall population estimate in recent years was only 1,000-2,000 birds occupying an extremely limited range in the southwestern corner of the state.

Historically, sage grouse have never been numerous in the state. Like pronghorn and bighorn sheep, North Dakota is at the eastern edge of the big bird's range, where habitat and climatic factors limit their success and expansion.

With more typical weather conditions in the southwest this spring reducing the chance of West Nile, and with adult birds more resistant to the disease, Game and Fish Department biologists hope to see the sage grouse population rebound.

"This year's decline in male sage grouse attending leks is not surprising due to current research indicating significant mortality in the region by West Nile virus," Robinson said. "We are on the eastern edge of the sage grouse range with very limited habitat, and with booming oil development in the region and increased human activity, it was inevitable that numbers would decrease. The question is, can we return the numbers to historical levels or are we in the process of documenting the extirpation of greater sage grouse in North Dakota?"

Management of sage grouse in North Dakota has followed a specific plan developed by a diverse group of participants. The plan outlines hunting harvest objectives for the species with a recommendation that the hunting season close if the spring census indicates fewer than 100 males in the population. This spring's count fell below those guidelines. If the 2008 hunting season is closed, it will mark the first time in nearly a half-century the season has not been open.

**NUMBER OF MALE SAGE GROUSE COUNTED
ON LEKS AND
TOTAL HARVEST OF SAGE GROUSE**

YEAR	TOTAL MALES COUNTED	TOTAL HARVEST
1980	380	21
1981	263	30
1982	299	43
1983	300	71
1984	367	49
1985	275	6
1986	142	33
1987	185	18
1988	263	Unknown
1989	250	27
1990	237	13
1991	253	16
1992	240	22
1993	274	14
1994	174	8
1995	149	15
1996	111	27
1997	128	24
1998	124	29
1999	195	25
2000	283	56
2001	232	20
2002	167	30
2003	174	8
2004	144	7
2005	225	14
2006	196	8
2007	159	21
2008	77	



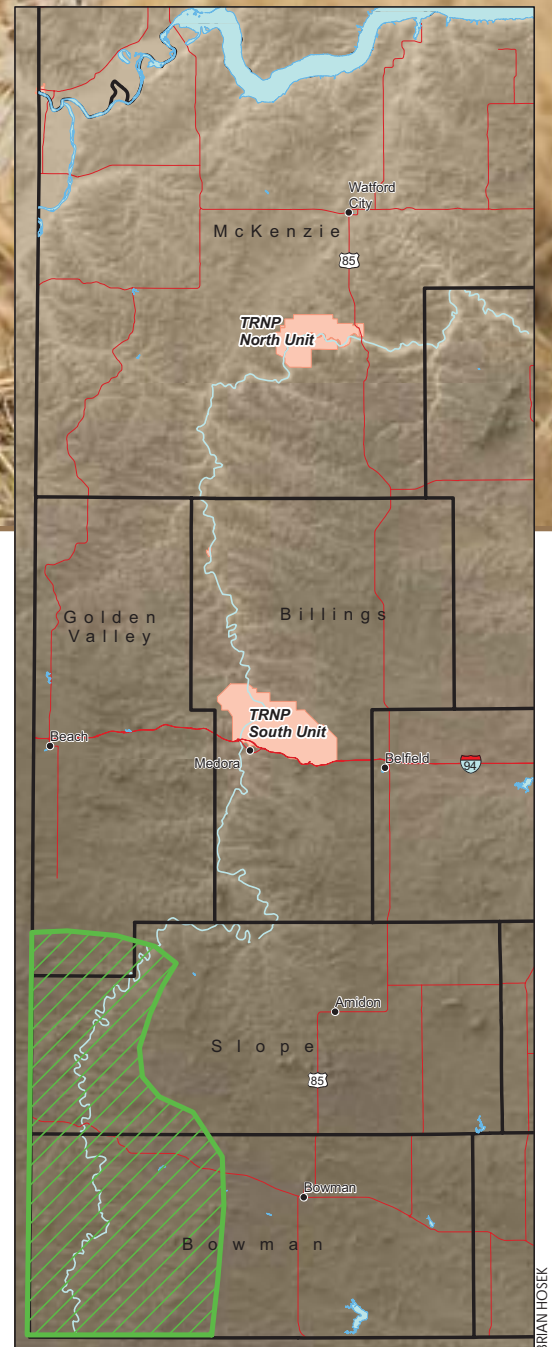
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When the spring breeding population increases above 100 males, Department biologists will recommend the season reopen. "Our objective is to maintain a viable sage grouse population in the state and to provide recreational hunting when bird numbers allow," Robinson said.

Even though sage grouse populations throughout the West are undergoing a review in status, the Department manages these birds based on the best biological data available and is not influenced by the present lawsuit against the U.S. Fish and Wildlife Service to list the species as endangered.

GREG FREEMAN is the Game and Fish Department's news editor.

In the grand scheme of things, sage grouse occupy (highlighted in green on the map) only a small portion of southwestern North Dakota.





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Katie Brunson, a graduate student researcher, releases a radio-collared sage grouse in southwestern North Dakota. Inset: Radio-collared sage grouse hens were tracked to determine their location every few days.



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Conservation Concern

Greater sage grouse are widely considered in many arenas as a species of significant conservation concern. Loss, degradation and fragmentation of important sagebrush grassland habitats have negatively influenced sage grouse populations.

A federal judge has ordered the U.S. Fish and Wildlife Service to review the data upon which it made the decision to not list the sage grouse as an endangered species in 2005. The judge is questioning whether the original decision was based on purely data and science, rather than political or other pressures.

This has sparked significant attention by state and federal agencies. Multistate and federal teams comprising of biologists and land managers have been

organized to address issues threatening sage grouse and sagebrush habitat and to meet the judge's mandate.

The FWS is requesting information from states regarding the species' historical and current population status, distribution and trends, its biology and ecology, and habitat selection. In addition, the FWS is asking states for information on the effects of disease, predation and wildfire; and destruction, modification or curtailment of the species' habitat or range. This information must be submitted to the FWS by the end of June to allow time to analyze the data and make an informed decision on listing sage grouse as endangered.